

## 1999 Seagrass

### SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**DATA LAYER NAME:** sg99  
**DATA LAYER DESCRIPTION:** 1999 seagrass data for Clearwater Harbor, Tampa Bay, Sarasota Bay, Lemon Bay and Charlotte Harbor. Interpreted from 1:24,000 natural color aerial photography and compiled using a Zeiss P3 analytical stereoplotter.  
**SECTION/DEPARTMENT:** Mapping and GIS/ Resource Management Department  
**REVISION/DATE:** 1.0/ November, 2000

These data were not collected under the supervision of a licensed Professional Surveyor and Mapper.

### LINEAGE

#### Description of Source Material(s)

a. Name: 1999 natural color aerial photography  
Scale (ratio): 1:24,000  
Projection: Photographic  
Datum: Not Applicable.  
Source Media: First generation positive transparencies from natural color negatives.  
Condition of Media: Excellent  
Date of Materials: December 1999  
Update Schedule: Every two years

#### Creator Organization or Individual

Name: Southwest Florida Water Management District  
Address: 2379 Broad Street, Brooksville, FL 34609-6899  
Phone: (352)796-7211

Comments: None.

b. Name: USGS Digital Orthophoto Quarter Quadrangles (DOQQs)  
Scale (ratio): 1:12,000  
Projection: UTM  
Datum: NAD83  
Source Media: cd-rom  
Condition of Media: Excellent  
Date of Materials: October 1994 - March 1995

Update Schedule: Every five years

Creator Organization or Individual

Name: United State Geological Survey  
Address: Sioux Falls, SD 57198  
Phone: 1-800-USA-MAPS

Comments: None.

c. Name: SWFWMD shoreline  
Scale (ratio): 1:12,000  
Projection: UTM  
Datum: HPGN  
Source Media: Digital Arc/INFO coverage  
Condition of Media: Not Applicable  
Date of Materials: January 2000  
Update Schedule: Unknown

Creator Organization or Individual

Name: Southwest Florida Water Management District  
Address: 2379 Broad Street, Brooksville, FL 34609-6899  
Phone: (52)796-7211

Comments: None.

d. Name: USGS control point locations  
Scale (ratio): 1:12,000  
Projection: UTM  
Datum: HGPN  
Source Media: Digital Arc/INFO coverage  
Condition of Media: Not Applicable  
Date of Materials: September 1998  
Update Schedule: Unknown

Creator Organization or Individual

Name: United State Geological Survey  
Address: Sioux Falls, SD 57198  
Phone: 1-800-USA-MAPS

Name: Southwest Florida Water Management District  
Address: 2379 Broad Street, Brooksville, FL 34609-6899  
Phone: (52)796-7211

Comments: The USGS provided control point location information to the SWFWMD in an ascii text file. This information was used to

create a Arc/INFO point coverage using the Arc/INFO *generate* command.

## Derivation Methods for Data

### Pre-automation Compilation

**Description:** A photointerpretation key was developed, using signatures identified in the natural color photography, to aid in the photointerpretation process. The classifications were defined by eight modified categories from the Florida Department of Transportation's (FDOT) Florida Land Use, Cover and Forms Classification System (FLUCCS). Pre and post-interpretation field reviews were conducted to obtain proper seagrass photo signatures.

The shoreline data and 1996 seagrass data, provided by SWFWMD , was translated to Microstations's design file format (.dgn) for use as a collateral data source in the photointerpretation process.

The 1999 aerial photography was aerotriangulated utilizing the USGS GPS derived control points and supplemental ground control points (GCP) collected from the doqqs. Supplemental GCPs were collected using photo identifiable points established on the doqqs and the natural color aerial photography. Coordinate information was obtained from the doqqs using ArcView software. Aerotriangulation was performed with PatB aerotriangulation software.

**Date of Compilation:** December 1999 - September 2000

#### Creator Organization or Individual

**Name:** AGRA Baymont, Inc.  
**Address:** 14100 58<sup>th</sup> Street North, Clearwater, FL 33760  
**Phone:** (727)539-1161

**Comments:** None.

### Automation Methods

**Description:** Seagrass beds and related features were stereoscopically photointerpreted from the 1:24,000 natural color aerial photography using stereo models set on the analytical stereoplottter. The FDOT modified FLUCCS system was used to code features within

study area boundaries. The minimum mapping unit for all features was 0.5 acres.

Digitizing was completed using Microstation with built in Cadmap functions. The 1996 seagrass data was implemented as collateral information during the compilation process. The SWFWMD shoreline data was incorporated into the 1999 seagrass data files and modified, where necessary, to reflect changes that have occurred in the 1999 natural color photography. Most changes were natural features, mainly extent of mangroves and mangrove islands, that had changed substantially or were no longer visible on the 1999 photography. Man-made alterations, such as canals, were added if the alterations affected seagrass beds or tidal flats that may be pertinent to the establishment of new seagrass beds.

The resulting 1999 seagrass .dgn file was translated to a Arc/INFO coverage using the Arc/INFO *IGDSARC* import command. Polygon topology was created using the Arc/INFO *BUILD* or *CLEAN* command. Quality controls checks for unlabeled, multi-labeled, contiguous polygons, sliver and dangle errors were performed.

Date of Automation: December 1999 to September 2000

Creator Organization or Individual

Name: AGRA Baymont, Inc.  
Address: 14100 58<sup>th</sup> Street North, Clearwater, FL 33760  
Phone: (727)539-1161

Equipment Used: Zeiss P3 analytical stereoplotter powered by a Magitonic Intel Pentium 200 mz, Sun UltraSparc Unix

Software Used: Microstation with built in Cadmap, ArcInfo 7.2, Arcview 3.2, PatB, Corpscon

Comments: None.

## COMPLETENESS OF FEATURE CAPTURE

Method: Visual quality control check of the draft linework and labels superimposed on the aerial photography using the

superimposition capability (VIDEOMAP) of the analytical stereoplotter.

Value: 100%

Date Determined: December 1999 to September 2000

Comments: The value determined does not include errors of omission or incorrect classification of features. It is estimated that all features identified in the mapping methodology were captured.

## **POSITIONAL ACCURACY**

Method: Visual inspection of the linework along with shoreline linework ,derived from 1:12,000 USGS doqqs ,overlaid onto aerotriangulated photography.

Value: +/- 10 meters

Date Determined: December 1999 to September 2000

Comments: The goal of this project was to map seagrass features that meet the National Map Accuracy Standards for 1:12,000 (+/- 33.3 feet). Feature boundaries of seagrass are not always well defined, however, given the use of ancillary data sources and extensive field review, it is expected that all data acreage is accurate.

## **ATTRIBUTE ACCURACY**

Method: The SWFWMD performed an accuracy assessment on the data to compare in-field classifications to photointerpreted map classification. Sixty random sample points of polygons coded as seagrass were generated. The sites were located in the field with a Global Positioning System (GPS). Fifty-five of the sites were accessible in the field.

Value: 96%, 53 of the 55 sample points were confirmed as accurately classified.

Date Determined: August - September 2000

Comments: None.

## ATTRIBUTE DESCRIPTION

Attribute Name	Attribute Description
fluccscode	Seagrass classification as defined in the Florida DOT's FLUCCS classification system.
datestamp	The date the feature was last edited or entered into the map libraries by SWFWMD staff.
lev1	Very general classification of land use/cover as defined in the Florida DOT's FLUCCS classification system.
lev2	Land use classification more detailed than Lev 1 as defined in the Florida DOT's FLUCCS classification system.
lev3	Detailed classification of Land use/cover as defined in the Florida DOT's FLUCCS classification systems.
lev4	Very specific classification of Land Use/cover as defined in the Florida DOT's FLUCCS classification system.